

Title (en)

SYSTEMS AND METHODS TO PRECISELY CONTROL OUTPUT PRESSURE IN BUFFERED SPRAYERS

Title (de)

SYSTEME UND VERFAHREN ZUR PRÄZISEN STEUERUNG DES AUSGANGSDRUCKS IN GEPUFFERTEN ZERSTÄUBERN

Title (fr)

SYSTÈMES ET PROCÉDÉS POUR LE CONTRÔLE PRÉCIS DE LA PRESSION DE SORTIE DANS DES PULVÉRISATEURS DE TAMPON

Publication

EP 4108345 A1 20221228 (EN)

Application

EP 22152096 A 20131106

Previously filed application

PCT/US2013/068825 20131106 WO

Priority

- US 201261723045 P 20121106
- US 201361805044 P 20130325
- US 201361810697 P 20130410
- EP 13852676 A 20131106
- US 2013068825 W 20131106

Abstract (en)

A liquid dispensing device is disclosed comprising a dispensing head, which in turn comprises an inlet valve, a piston (3) and a piston chamber, and an actuator for controlling the piston (3). The dispensing head further comprises a buffer (6) in fluid communication with the piston chamber, an outlet valve having a defined minimum opening pressure in fluid communication with one of (i) the buffer and (ii) the buffer and the piston chamber, and a nozzle (9) with a defined throughput in fluid communication with the outlet valve. The buffer is a gas buffer (6) comprising a gas-filled buffer bag made from a flexible material and arranged in a buffer housing.

IPC 8 full level

B05B 9/04 (2006.01); **B05B 11/00** (2006.01)

CPC (source: EP US)

A47L 11/4088 (2013.01 - EP US); **A47L 13/22** (2013.01 - EP US); **B05B 9/0883** (2013.01 - EP US); **B05B 11/0032** (2013.01 - EP US); **B05B 11/0075** (2013.01 - EP US); **B05B 11/1011** (2013.01 - EP US); **B05B 11/1038** (2013.01 - EP US); **B05B 11/1073** (2013.01 - EP US); **B05B 11/1074** (2013.01 - EP US); **B05B 11/1076** (2013.01 - EP US); **B05B 11/1077** (2013.01 - EP US); **B05B 11/1098** (2013.01 - EP US); **B05B 15/62** (2018.02 - EP US); **B29C 65/18** (2013.01 - EP US); **B29C 65/743** (2013.01 - EP US); **B29C 65/7802** (2013.01 - EP US); **B29C 65/7841** (2013.01 - EP US); **B29C 66/0014** (2013.01 - EP US); **B29C 66/0342** (2013.01 - EP US); **B29C 66/1122** (2013.01 - EP US); **B29C 66/4312** (2013.01 - EP US); **B29C 66/43121** (2013.01 - EP US); **B29C 66/439** (2013.01 - EP US); **B29C 66/53262** (2013.01 - EP US); **B29C 66/72341** (2013.01 - EP US); **B29C 66/81419** (2013.01 - EP US); **B29C 66/81465** (2013.01 - EP US); **B29C 66/81815** (2013.01 - EP US); **B29C 66/8322** (2013.01 - EP US); **B29C 66/83221** (2013.01 - EP US); **B29C 66/849** (2013.01 - EP US); **B29C 65/08** (2013.01 - EP US); **B29C 65/16** (2013.01 - EP US); **B29C 65/48** (2013.01 - EP US); **B29C 66/71** (2013.01 - EP US)

C-Set (source: EP US)

1. **B29C 66/71** + **B29K 2023/06**
2. **B29C 66/71** + **B29K 2023/12**
3. **B29C 66/71** + **B29K 2067/00**
4. **B29C 66/71** + **B29K 2077/00**
5. **B29C 66/71** + **B29K 2083/00**

Citation (applicant)

- US 201213467971 A 20120509
- US 201113068267 A 20110505
- US 201213623860 A 20120920

Citation (search report)

[XA] JP 2010228794 A 20101014 - MITANI VALVE CO LTD

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)

WO 2014074654 A1 20140515; AU 2013341261 A1 20150702; AU 2013341261 B2 20180201; AU 2018202999 A1 20180531; AU 2018202999 B2 20200618; BR 112015010259 A2 20170711; BR 112015010259 B1 20201215; CN 104903005 A 20150909; CN 104903005 B 20190514; CN 110000026 A 20190712; CN 110000026 B 20220107; EP 2916962 A1 20150916; EP 2916962 A4 20160713; EP 2916962 B1 20220119; EP 4108345 A1 20221228; ES 2907045 T3 20220421; JP 2016501117 A 20160118; JP 2019089063 A 20190613; JP 6460997 B2 20190130; JP 6787986 B2 20201118; MX 2015005724 A 20150812; MX 2021003900 A 20210623; PL 2916962 T3 20220425; US 11027298 B2 20210608; US 12023695 B2 20240702; US 2014246506 A1 20140904; US 2022203392 A1 20220630

DOCDB simple family (application)

US 2013068825 W 20131106; AU 2013341261 A 20131106; AU 2018202999 A 20180430; BR 112015010259 A 20131106; CN 201380069632 A 20131106; CN 201910312117 A 20131106; EP 13852676 A 20131106; EP 22152096 A 20131106; ES 13852676 T 20131106; JP 2015540899 A 20131106; JP 2018239610 A 20181221; MX 2015005724 A 20131106; MX 2021003900 A 20150506; PL 13852676 T 20131106; US 201314073835 A 20131106; US 202117314730 A 20210507